

## Sequence Listing

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<110> MEDEXGEN INC  
CHUNG, Yong Hoon  
CHO, Hoon Sik  
PARK, Hong Gyu  
YI, Ki Wan

<120> PHARMACEUTICAL COMPOSITION FOR TREATMENT OF IMMUNOLOGICAL  
DISORDERS

<130> P052MED02PCT

<150> KR10-2004-0010835  
<151> 2004-02-18

<160> 26

<170> KopatentIn 1.71

<210> 1  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer, oligo-LAG3-F-EcoRI

<400> 1  
ggaattcatg tgggaggctc agttcctggg c 31

<210> 2  
<211> 28  
<212> DNA  
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<223> primer, oligo-LAG3-R-5P

# Sequence Listing

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<400> 2

agtgagggtta tacatgatgg agacgttg

28

<210> 3

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> primer, oligo-LAG3-F-5P

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ctccagccag gggctgaggt c

21

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<212> DNA

<213> Artificial Sequence

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<223> primer, oligo-LAG3-R-SpeI

<400> 4

gactagtgtgg gggctccaga cccagaacag

30

<210> 5

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> primer, hIgG-F-SpeI

<400> 5

# Sequence Listing

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gagtagtgca gagcccaaatt cttgtgac

28

<210> 6  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer, hIgG-R-XbaI

<400> 6  
gctctagagc tcatttaccc ggagacaggg agag

34

<210> 7  
<211> 1503  
<212> DNA  
<213> Homo sapiens

<220>  
<221> sig\_peptide  
<222> (1)..(66)

<220>  
<221> CDS  
<222> (1)..(1500)  
<223> LAG3/Fc

<400> 7  
atg tgg gag gct cag ttc ctg ggc ttg ctg ttt ctg cag ccg ctt tgg  
Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp  
1 5 10 15

48

gtg gct cca gtg aag cct ctc cag cca ggg gct gag gtc ccg gtg gtg  
Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val  
20 25 30

96

# Sequence Listing

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<p>tgg gcc cag gag ggg gct cct gcc cag ctc ccc tgc agc ccc aca atc  Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile</p> <p style="text-align: center;">35                      40                      45</p>	144
<p>ccc ctc cag gat ctc agc ctt ctg cga aga gca ggg gtc act tgg cag  Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln</p> <p style="text-align: center;">50                      55                      60</p>	192
<p>cat cag cca gac agt ggc ccg ccc gct gcc gcc ccc ggc cat ccc ctg  His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu</p> <p style="text-align: center;">65                      70                      75                      80</p>	240
<p>gcc ccc ggc cct cac ccg gcg gcg ccc tcc tcc tgg ggg ccc agg ccc  Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro</p> <p style="text-align: center;">85                      90                      95</p>	288
<p>cgc cgc tac acg gtg ctg agc gtg ggt ccc gga ggc ctg cgc agc ggg  Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly</p> <p style="text-align: center;">100                      105                      110</p>	336
<p>agg ctg ccc ctg cag ccc cgc gtc cag ctg gat gag cgc ggc cgg cag  Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln</p> <p style="text-align: center;">115                      120                      125</p>	384
<p>cgc ggg gac ttc tcg cta tgg ctg cgc cca gcc cgg cgc gcg gac gcc  Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala</p> <p style="text-align: center;">130                      135                      140</p>	432
<p>ggc gag tac cgc gcc gcg gtg cac ctc agg gac cgc gcc ctc tcc tgc  Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys</p> <p style="text-align: center;">145                      150                      155                      160</p>	480
<p>cgc ctc cgt ctg cgc ctg ggc cag gcc tcg atg act gcc agc ccc cca  Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro</p> <p style="text-align: center;">165                      170                      175</p>	528
<p>gga tct ctc aga gcc tcc gac tgg gtc att ttg aac tgc tcc ttc agc  Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser</p> <p style="text-align: center;">180                      185                      190</p>	576

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cgc cct gac cgc cca gcc tct gtg cat tgg ttc cgg aac cgg ggc cag	624
Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln	
195 200 205	
ggc cga gtc cct gtc cgg gag tcc ccc cat cac cac tta gcg gaa agc	672
Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser	
210 215 220	
ttc ctc ttc ctg ccc caa gtc agc ccc atg gac tct ggg ccc tgg ggc	720
Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly	
225 230 235 240	
tgc atc ctc acc tac aga gat ggc ttc aac gtc tcc atc atg tat aac	768
Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn	
245 250 255	
ctc act gtt ctg ggt ctg gag ccc cca act agt gca gag ccc aaa tct	816
Leu Thr Val Leu Gly Leu Glu Pro Pro Thr Ser Ala Glu Pro Lys Ser	
260 265 270	
tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa ctc ctg	864
Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu	
275 280 285	
ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc	912
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu	
290 295 300	
atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc	960
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser	
305 310 315 320	
cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag	1008
His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu	
325 330 335	
gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc acg	1056
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr	
340 345 350	

# Sequence Listing

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<p>tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat  Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn  355 360 365</p>	1104
<p>ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc  Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro  370 375 380</p>	1152
<p>atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag  Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln  385 390 395 400</p>	1200
<p>gtg tac acc ctg ccc cca tcc cgg gag gag atg acc aag aac cag gtc  Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val  405 410 415</p>	1248
<p>agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg  Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val  420 425 430</p>	1296
<p>gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg cct  Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro  435 440 445</p>	1344
<p>ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tat agc aag ctc acc  Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr  450 455 460</p>	1392
<p>gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg  Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val  465 470 475 480</p>	1440
<p>atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg  Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu  485 490 495</p>	1488
<p>tcc ccg ggt aaa tga  Ser Pro Gly Lys  500</p>	1503

# Sequence Listing

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<210> 8

<211> 500

<212> PRT

<213> Homo sapiens

<400> 8

Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp

1 5 10 15

Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val

20 25 30

Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile

35 40 45

Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln

50 55 60

His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu

65 70 75 80

Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro

85 90 95

Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly

100 105 110

Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln

115 120 125

Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala

130 135 140

Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys

145 150 155 160

Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro

165 170 175

# Sequence Listing

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Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser  
 180 185 190

Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln  
 195 200 205

Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser  
 210 215 220

Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly  
 225 230 235 240

Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn  
 245 250 255

Leu Thr Val Leu Gly Leu Glu Pro Pro Thr Ser Ala Glu Pro Lys Ser  
 260 265 270

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu  
 275 280 285

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu  
 290 295 300

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser  
 305 310 315 320

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu  
 325 330 335

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr  
 340 345 350

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn  
 355 360 365

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro  
 370 375 380

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln



# Sequence Listing

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385              390              395              400

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
              405              410              415

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
              420              425              430

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
              435              440              445

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
              450              455              460

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
465              470              475              480

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
              485              490              495

Ser Pro Gly Lys
              500

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<210>      9
<211>    2211
<212>    DNA
<213>  Homo sapiens

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<220>
<221>    sig_peptide
<222>    (1)..(66)

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<220>
<221>    CDS
<222>    (1)..(2208)
<223>    LAG3-LAG3/Fc

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<400>      9

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# Sequence Listing

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<p>atg tgg gag gct cag ttc ctg ggc ttg ctg ttt ctg cag ccg ctt tgg  Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp  1                      5                      10                      15</p>	48
<p>gtg gct cca gtg aag cct ctc cag cca ggg gct gag gtc ccg gtg gtg  Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val                      20                      25                      30</p>	96
<p>tgg gcc cag gag ggg gct cct gcc cag ctc ccc tgc agc ccc aca atc  Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile                      35                      40                      45</p>	144
<p>ccc ctc cag gat ctc agc ctt ctg cga aga gca ggg gtc act tgg cag  Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln                      50                      55                      60</p>	192
<p>cat cag cca gac agt ggc ccg ccc gct gcc gcc ccc ggc cat ccc ctg  His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu  65                      70                      75                      80</p>	240
<p>gcc ccc ggc cct cac ccg gcg gcg ccc tcc tcc tgg ggg ccc agg ccc  Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro                      85                      90                      95</p>	288
<p>cgc cgc tac acg gtg ctg agc gtg ggt ccc gga ggc ctg cgc agc ggg  Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly                      100                      105                      110</p>	336
<p>agg ctg ccc ctg cag ccc cgc gtc cag ctg gat gag cgc ggc cgg cag  Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln                      115                      120                      125</p>	384
<p>cgc ggg gac ttc tcg cta tgg ctg cgc cca gcc cgg cgc gcg gac gcc  Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala  130                      135                      140</p>	432
<p>ggc gag tac cgc gcc gcg gtg cac ctc agg gac cgc gcc ctc tcc tgc  Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys  145                      150                      155                      160</p>	480

# Sequence Listing

cgc ctc cgt ctg cgc ctg ggc cag gcc tcg atg act gcc agc ccc cca	528
Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro	
165 170 175	
gga tct ctc aga gcc tcc gac tgg gtc att ttg aac tgc tcc ttc agc	576
Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser	
180 185 190	
cgc cct gac cgc cca gcc tct gtg cat tgg ttc cgg aac cgg ggc cag	624
Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln	
195 200 205	
ggc cga gtc cct gtc cgg gag tcc ccc cat cac cac tta gcg gaa agc	672
Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser	
210 215 220	
ttc ctc ttc ctg ccc caa gtc agc ccc atg gac tct ggg ccc tgg ggc	720
Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly	
225 230 235 240	
tgc atc ctc acc tac aga gat ggc ttc aac gtc tcc atc atg tat aac	768
Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn	
245 250 255	
ctc act ctc cag cca ggg gct gag gtc ccg gtg gtg tgg gcc cag gag	816
Leu Thr Leu Gln Pro Gly Ala Glu Val Pro Val Val Trp Ala Gln Glu	
260 265 270	
ggg gct cct gcc cag ctc ccc tgc agc ccc aca atc ccc ctc cag gat	864
Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile Pro Leu Gln Asp	
275 280 285	
ctc agc ctt ctg cga aga gca ggg gtc act tgg cag cat cag cca gac	912
Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln His Gln Pro Asp	
290 295 300	
agt ggc ccg ccc gct gcc gcc ccc ggc cat ccc ctg gcc ccc ggc cct	960
Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu Ala Pro Gly Pro	
305 310 315 320	

# Sequence Listing

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cac ccg gcg gcg ccc tcc tcc tgg ggg ccc agg ccc cgc cgc tac acg	1008
His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro Arg Arg Tyr Thr	
325 330 335	
gtg ctg agc gtg ggt ccc gga ggc ctg cgc agc ggg agg ctg ccc ctg	1056
Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly Arg Leu Pro Leu	
340 345 350	
cag ccc cgc gtc cag ctg gat gag cgc ggc cgg cag cgc ggg gac ttc	1104
Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln Arg Gly Asp Phe	
355 360 365	
tcg cta tgg ctg cgc cca gcc cgg cgc gcg gac gcc ggc gag tac cgc	1152
Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala Gly Glu Tyr Arg	
370 375 380	
gcc gcg gtg cac ctc agg gac cgc gcc ctc tcc tgc cgc ctc cgt ctg	1200
Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys Arg Leu Arg Leu	
385 390 395 400	
cgc ctg ggc cag gcc tcg atg act gcc agc ccc cca gga tct ctc aga	1248
Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro Gly Ser Leu Arg	
405 410 415	
gcc tcc gac tgg gtc att ttg aac tgc tcc ttc agc cgc cct gac cgc	1296
Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser Arg Pro Asp Arg	
420 425 430	
cca gcc tct gtg cat tgg ttc cgg aac cgg ggc cag ggc cga gtc cct	1344
Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln Gly Arg Val Pro	
435 440 445	
gtc cgg gag tcc ccc cat cac cac tta gcg gaa agc ttc ctc ttc ctg	1392
Val Arg Glu Ser Pro His His His Leu Ala Glu Ser Phe Leu Phe Leu	
450 455 460	
ccc caa gtc agc ccc atg gac tct ggg ccc tgg ggc tgc atc ctc acc	1440
Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly Cys Ile Leu Thr	
465 470 475 480	

# Sequence Listing

tac aga gat ggc ttc aac gtc tcc atc atg tat aac ctc act gtt ctg	1488
Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn Leu Thr Val Leu	
485 490 495	
ggg ctg gag ccc cca act agt gca gag ccc aaa tct tgt gac aaa act	1536
Gly Leu Glu Pro Pro Thr Ser Ala Glu Pro Lys Ser Cys Asp Lys Thr	
500 505 510	
cac aca tgc cca ccg tgc cca gca cct gaa ctc ctg ggg gga ccg tca	1584
His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser	
515 520 525	
gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg	1632
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg	
530 535 540	
acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct	1680
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro	
545 550 555 560	
gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc	1728
Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala	
565 570 575	
aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgt gtg gtc	1776
Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val	
580 585 590	
agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac	1824
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr	
595 600 605	
aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc	1872
Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr	
610 615 620	
atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg	1920
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu	
625 630 635 640	

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ccc cca tcc cgg gag gag atg acc aag aac cag gtc agc ctg acc tgc 1968  
Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys  
645 650 655

ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc 2016  
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser  
660 665 670

aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac 2064  
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp  
675 680 685

tcc gac ggc tcc ttc ttc ctc tat agc aag ctc acc gtg gac aag agc 2112  
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser  
690 695 700

agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct 2160  
Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala  
705 710 715 720

ctg cac aac cac tac acg cag aag agc ctc tcc ctg tcc ccg ggt aaa 2208  
Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
725 730 735

tg a 2211

<210> 10

<211> 736

<212> PRT

<213> Homo sapiens

<400> 10

Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp  
1 5 10 15

Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val  
20 25 30

Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile

# Sequence Listing

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35	40	45
Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln		
50	55	60
His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu		
65	70	75 80
Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro		
85	90	95
Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly		
100	105	110
Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln		
115	120	125
Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala		
130	135	140
Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys		
145	150	155 160
Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro		
165	170	175
Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser		
180	185	190
Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln		
195	200	205
Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser		
210	215	220
Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly		
225	230	235 240
Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn		
245	250	255

# Sequence Listing

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Leu Thr Leu Gln Pro Gly Ala Glu Val Pro Val Val Trp Ala Gln Glu  
 260 265 270

Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile Pro Leu Gln Asp  
 275 280 285

Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln His Gln Pro Asp  
 290 295 300

Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu Ala Pro Gly Pro  
 305 310 315 320

His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro Arg Arg Tyr Thr  
 325 330 335

Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly Arg Leu Pro Leu  
 340 345 350

Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln Arg Gly Asp Phe  
 355 360 365

Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala Gly Glu Tyr Arg  
 370 375 380

Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys Arg Leu Arg Leu  
 385 390 395 400

Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro Gly Ser Leu Arg  
 405 410 415

Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser Arg Pro Asp Arg  
 420 425 430

Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln Gly Arg Val Pro  
 435 440 445

Val Arg Glu Ser Pro His His His Leu Ala Glu Ser Phe Leu Phe Leu  
 450 455 460



# Sequence Listing

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Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly Cys Ile Leu Thr  
 465                      470                      475                      480

Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn Leu Thr Val Leu  
                     485                      490                      495

Gly Leu Glu Pro Pro Thr Ser Ala Glu Pro Lys Ser Cys Asp Lys Thr  
                     500                      505                      510

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser  
                     515                      520                      525

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg  
                     530                      535                      540

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro  
 545                      550                      555                      560

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala  
                     565                      570                      575

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val  
                     580                      585                      590

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr  
                     595                      600                      605

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr  
                     610                      615                      620

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu  
 625                      630                      635                      640

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys  
                     645                      650                      655

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser  
                     660                      665                      670

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp

# Sequence Listing

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675

680

685

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser  
 690 695 700

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala  
 705 710 715 720

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 725 730 735

<210> 11  
 <211> 1473  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1470)  
 <223> TNFR2/Fc

<400> 11  
 atg gcg ccc gtc gcc gtc tgg gcc gcg ctg gcc gtc gga ctg gag ctc 48  
 Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu  
 1 5 10 15  
 tgg gct gcg gcg cac gcc ttg ccc gcc cag gtg gca ttt aca ccc tac 96  
 Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr  
 20 25 30  
 gcc ccg gag ccc ggg agc aca tgc cgg ctc aga gaa tac tat gac cag 144  
 Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln  
 35 40 45  
 aca gct cag atg tgc tgc agc aaa tgc tcg ccg ggc caa cat gca aaa 192  
 Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys

# Sequence Listing

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50	55	60	
gtc ttc tgt acc aag acc tcg gac acc gtg tgt gac tcc tgt gag gac			240
Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp			
65	70	75	80
agc aca tac acc cag ctc tgg aac tgg gtt ccc gag tgc ttg agc tgt			288
Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys			
	85	90	95
ggc tcc cgc tgt agc tct gac cag gtg gaa act caa gcc tgc act cgg			336
Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg			
	100	105	110
gaa cag aac cgc atc tgc acc tgc agg ccc ggc tgg tac tgc gcg ctg			384
Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu			
	115	120	125
agc aag cag gag ggg tgc cgg ctg tgc gcg ccg ctg cgc aag tgc cgc			432
Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg			
	130	135	140
ccg ggc ttc ggc gtg gcc aga cca gga act gaa aca tca gac gtg gtg			480
Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val			
	145	150	155
tgc aag ccc tgt gcc ccg ggg acg ttc tcc aac acg act tca tcc acg			528
Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr			
	165	170	175
gat att tgc agg ccc cac cag atc tgt aac gtg gtg gcc atc cct ggg			576
Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly			
	180	185	190
aat gca agc atg gat gca gtc tgc acg tcc acg tcc ccc acc cgg agt			624
Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser			
	195	200	205
atg gcc cca ggg gca gta cac tta ccc cag cca gtg tcc aca cga tcc			672
Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser			

# Sequence Listing

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210	215	220	
caa cac acg cag cca act cca gaa ccc agc act gct cca agc acc tcc			720
Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser			
225	230	235	240
ttc ctg ctc cca atg ggc ccc agc ccc cca gct gaa ggg agc act ggc			768
Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly			
245	250	255	
gac gca gag ccc aaa tct tgt gac aaa act cac aca tgc cca ccg tgc			816
Asp Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys			
260	265	270	
cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca			864
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro			
275	280	285	
aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc			912
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys			
290	295	300	
gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg			960
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp			
305	310	315	320
tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag			1008
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu			
325	330	335	
gag cag tac aac agc acg tac cgg gtg gtc agc gtc ctc acc gtc ctg			1056
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu			
340	345	350	
cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac			1104
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn			
355	360	365	
aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg			1152
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly			

# Sequence Listing

370	375	380	
cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag			1200
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu			
385	390	395	400
ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat			1248
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr			
405	410	415	
ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac			1296
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn			
420	425	430	
aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc tcc ttc			1344
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Ser Phe			
435	440	445	
ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac			1392
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn			
450	455	460	
gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg			1440
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr			
465	470	475	480
cag aag agc ctc tcc ctg tct ccg ggt aaa tga			1473
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
485	490		
<210> 12			
<211> 490			
<212> PRT			
<213> Homo sapiens			
<400> 12			
Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu			
1	5	10	15

# Sequence Listing

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Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr  
 20 25 30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln  
 35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys  
 50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp  
 65 70 75 80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys  
 85 90 95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg  
 100 105 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu  
 115 120 125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg  
 130 135 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val  
 145 150 155 160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr  
 165 170 175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly  
 180 185 190

Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser  
 195 200 205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser  
 210 215 220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser

# Sequence Listing

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225	230	235	240
Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly			
245	250	255	
Asp Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys			
260	265	270	
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro			
275	280	285	
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys			
290	295	300	
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp			
305	310	315	320
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu			
325	330	335	
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu			
340	345	350	
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn			
355	360	365	
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly			
370	375	380	
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu			
385	390	395	400
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr			
405	410	415	
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn			
420	425	430	
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Ser Phe			
435	440	445	

# Sequence Listing

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Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn  
 450 455 460

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr  
 465 470 475 480

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 485 490

<210> 13  
 <211> 2163  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(2160)  
 <223> TNFR2-TNFR2/Fc

<400> 13  
 atg gcg ccc gtc gcc gtc tgg gcc gcg ctg gcc gtc gga ctg gag ctc 48  
 Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu  
 1 5 10 15  
 tgg gct gcg gcg cac gcc ttg ccc gcc cag gtg gca ttt aca ccc tac 96  
 Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr  
 20 25 30  
 gcc ccg gag ccc ggg agc aca tgc cgg ctc aga gaa tac tat gac cag 144  
 Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln  
 35 40 45  
 aca gct cag atg tgc tgc agc aaa tgc tcg ccg ggc caa cat gca aaa 192  
 Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys  
 50 55 60  
 gtc ttc tgt acc aag acc tcg gac acc gtg tgt gac tcc tgt gag gac 240



- 25 -

- 26 -

- 27 -

# Sequence Listing

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Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala			
545	550	555	560
aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgg gtg gtc			1728
Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val			
565	570	575	
agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac			1776
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr			
580	585	590	
aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc			1824
Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr			
595	600	605	
atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg			1872
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu			
610	615	620	
ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc tgc			1920
Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys			
625	630	635	640
ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc			1968
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser			
645	650	655	
aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac			2016
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp			
660	665	670	
tcc gac ggc tcc tcc ttc ctc tac agc aag ctc acc gtg gac aag agc			2064
Ser Asp Gly Ser Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser			
675	680	685	
agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct			2112
Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala			
690	695	700	
ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa			2160

# Sequence Listing

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Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 705 710 715 720

tga 2163

<210> 14  
 <211> 720  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu  
 1 5 10 15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr  
 20 25 30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln  
 35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys  
 50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp  
 65 70 75 80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys  
 85 90 95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg  
 100 105 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu  
 115 120 125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg  
 130 135 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val

# Sequence Listing

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145	150	155	160
Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr			
	165	170	175
Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly			
	180	185	190
Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser			
	195	200	205
Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser			
	210	215	220
Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser			
	225	230	240
Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Gly Ser			
	245	250	255
Asn Ala Thr Thr Pro Tyr Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu			
	260	265	270
Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys Ser Lys Cys Ser			
	275	280	285
Pro Gly Gln His Ala Lys Val Phe Cys Thr Lys Thr Ser Asp Thr Val			
	290	295	300
Cys Asp Ser Cys Glu Asp Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val			
	305	310	320
Pro Glu Cys Leu Ser Cys Gly Ser Arg Cys Ser Ser Asp Gln Val Glu			
	325	330	335
Thr Gln Ala Cys Thr Arg Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro			
	340	345	350
Gly Trp Tyr Cys Ala Leu Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala			
	355	360	365

# Sequence Listing

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Pro Leu Arg Lys Cys Arg Pro Gly Phe Gly Val Ala Arg Pro Gly Thr  
370 375 380

Glu Thr Ser Asp Val Val Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser  
385 390 395 400

Asn Thr Thr Ser Ser Thr Asp Ile Cys Arg Pro His Gln Ile Cys Asn  
405 410 415

Val Val Ala Ile Pro Gly Asn Ala Ser Met Asp Ala Val Cys Thr Ser  
420 425 430

Thr Ser Pro Thr Arg Ser Met Ala Pro Gly Ala Val His Leu Pro Gln  
435 440 445

Pro Val Ser Thr Arg Ser Gln His Thr Gln Pro Thr Pro Glu Pro Ser  
450 455 460

Thr Ala Pro Ser Thr Ser Phe Leu Leu Pro Met Gly Pro Ser Pro Pro  
465 470 475 480

Ala Glu Gly Ser Thr Gly Asp Ala Glu Pro Lys Ser Cys Asp Lys Thr  
485 490 495

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser  
500 505 510

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg  
515 520 525

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro  
530 535 540

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala  
545 550 555 560

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val  
565 570 575

# Sequence Listing

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Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr  
 580 585 590

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr  
 595 600 605

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu  
 610 615 620

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys  
 625 630 635 640

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser  
 645 650 655

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp  
 660 665 670

Ser Asp Gly Ser Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser  
 675 680 685

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala  
 690 695 700

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 705 710 715 720

<210> 15  
 <211> 1314  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1311)  
 <223> CD2/Fc

<400> 15



# Sequence Listing

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<p>atg agc ttt cca tgt aaa ttt gta gcc agc ttc ctt ctg att ttc aat  Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn  1                      5                      10                      15</p>	48
<p>ggt tct tcc aaa ggt gca gtc tcc aaa gag att acg aat gcc ttg gaa  Val Ser Ser Lys Gly Ala Val Ser Lys Glu Ile Thr Asn Ala Leu Glu                      20                      25                      30</p>	96
<p>acc tgg ggt gcc ttg ggt cag gac atc aac ttg gac att cct agt ttt  Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp Ile Pro Ser Phe                      35                      40                      45</p>	144
<p>caa atg agt gat gat att gac gat ata aaa tgg gaa aaa act tca gac  Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu Lys Thr Ser Asp                      50                      55                      60</p>	192
<p>aag aaa aag att gca caa ttc aga aaa gag aaa gag act ttc aag gaa  Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu Thr Phe Lys Glu  65                      70                      75                      80</p>	240
<p>aaa gat aca tat aag cta ttt aaa aat gga act ctg aaa att aag cat  Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu Lys Ile Lys His                      85                      90                      95</p>	288
<p>ctg aag acc gat gat cag gat atc tac aag gta tca ata tat gat aca  Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser Ile Tyr Asp Thr                      100                      105                      110</p>	336
<p>aaa gga aaa aat gtg ttg gaa aaa ata ttt gat ttg aag att caa gag  Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu Lys Ile Gln Glu                      115                      120                      125</p>	384
<p>agg gtc tca aaa cca aag atc tcc tgg act tgt atc aac aca acc ctg  Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile Asn Thr Thr Leu                      130                      135                      140</p>	432
<p>acc tgt gag gta atg aat gga act gac ccc gaa tta aac ctg tat caa  Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu Asn Leu Tyr Gln  145                      150                      155                      160</p>	480

# Sequence Listing

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gat ggg aaa cat cta aaa ctt tct cag agg gtc atc aca cac aag tgg	528
Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile Thr His Lys Trp	
165 170 175	
acc acc agc ctg agt gca aaa ttc aag tgc aca gca ggg aac aaa gtc	576
Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala Gly Asn Lys Val	
180 185 190	
agc aag gaa tcc agt gtc gag cct gtc agc tgt cct gca gag ccc aaa	624
Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro Ala Glu Pro Lys	
195 200 205	
tct tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa ctc	672
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu	
210 215 220	
ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc	720
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr	
225 230 235 240	
ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg	768
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val	
245 250 255	
agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg	816
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val	
260 265 270	
gag gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc	864
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser	
275 280 285	
acg tac cgg gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg	912
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu	
290 295 300	
aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca gcc	960
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala	
305 310 315 320	

# Sequence Listing

ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca 1008  
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro  
                   325                  330                  335

cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac cag 1056  
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln  
                   340                  345                  350

gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc 1104  
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala  
                   355                  360                  365

gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg 1152  
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr  
                   370                  375                  380

cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag ctc 1200  
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu  
                   385                  390                  395                  400

acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc 1248  
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser  
                   405                  410                  415

gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc 1296  
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser  
                   420                  425                  430

ctg tct ccg ggt aaa tga 1314  
 Leu Ser Pro Gly Lys  
                   435

<210> 16

<211> 437

<212> PRT

<213> Homo sapiens

<400> 16

Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn

# Sequence Listing

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1	5	10	15
Val Ser Ser Lys Gly Ala Val Ser Lys Glu Ile Thr Asn Ala Leu Glu			
20	25	30	
Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp Ile Pro Ser Phe			
35	40	45	
Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu Lys Thr Ser Asp			
50	55	60	
Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu Thr Phe Lys Glu			
65	70	75	80
Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu Lys Ile Lys His			
85	90	95	
Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser Ile Tyr Asp Thr			
100	105	110	
Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu Lys Ile Gln Glu			
115	120	125	
Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile Asn Thr Thr Leu			
130	135	140	
Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu Asn Leu Tyr Gln			
145	150	155	160
Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile Thr His Lys Trp			
165	170	175	
Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala Gly Asn Lys Val			
180	185	190	
Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro Ala Glu Pro Lys			
195	200	205	
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu			
210	215	220	

# Sequence Listing

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Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
 225                      230                      235                      240

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
                     245                      250                      255

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val  
                     260                      265                      270

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser  
                     275                      280                      285

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu  
                     290                      295                      300

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala  
 305                      310                      315                      320

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro  
                     325                      330                      335

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln  
                     340                      345                      350

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala  
                     355                      360                      365

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr  
                     370                      375                      380

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu  
 385                      390                      395                      400

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser  
                     405                      410                      415

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser  
                     420                      425                      430

# Sequence Listing

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Leu Ser Pro Gly Lys

435

<210> 17  
 <211> 1854  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1851)  
 <223> CD2-CD2/Fc

<400> 17  
 atg agc ttt cca tgt aaa ttt gta gcc agc ttc ctt ctg att ttc aat 48  
 Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn  
 1 5 10 15  
 gtt tct tcc aaa ggt gca gtc tcc aaa gag att acg aat gcc ttg gaa 96  
 Val Ser Ser Lys Gly Ala Val Ser Lys Glu Ile Thr Asn Ala Leu Glu  
 20 25 30  
 acc tgg ggt gcc ttg ggt cag gac atc aac ttg gac att cct agt ttt 144  
 Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp Ile Pro Ser Phe  
 35 40 45  
 caa atg agt gat gat att gac gat ata aaa tgg gaa aaa act tca gac 192  
 Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu Lys Thr Ser Asp  
 50 55 60  
 aag aaa aag att gca caa ttc aga aaa gag aaa gag act ttc aag gaa 240  
 Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu Thr Phe Lys Glu  
 65 70 75 80  
 aaa gat aca tat aag cta ttt aaa aat gga act ctg aaa att aag cat 288  
 Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu Lys Ile Lys His  
 85 90 95

# Sequence Listing

ctg aag acc gat gat cag gat atc tac aag gta tca ata tat gat aca	336
Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser Ile Tyr Asp Thr	
100 105 110	
aaa gga aaa aat gtg ttg gaa aaa ata ttt gat ttg aag att caa gag	384
Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu Lys Ile Gln Glu	
115 120 125	
agg gtc tca aaa cca aag atc tcc tgg act tgt atc aac aca acc ctg	432
Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile Asn Thr Thr Leu	
130 135 140	
acc tgt gag gta atg aat gga act gac ccc gaa tta aac ctg tat caa	480
Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu Asn Leu Tyr Gln	
145 150 155 160	
gat ggg aaa cat cta aaa ctt tct cag agg gtc atc aca cac aag tgg	528
Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile Thr His Lys Trp	
165 170 175	
acc acc agc ctg agt gca aaa ttc aag tgc aca gca ggg aac aaa gtc	576
Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala Gly Asn Lys Val	
180 185 190	
agc aag gaa tcc agt gtc gag cct gtc agc tgt cct aaa gag att acg	624
Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro Lys Glu Ile Thr	
195 200 205	
aat gcc ttg gaa acc tgg ggt gcc ttg ggt cag gac atc aac ttg gac	672
Asn Ala Leu Glu Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp	
210 215 220	
att cct agt ttt caa atg agt gat gat att gac gat ata aaa tgg gaa	720
Ile Pro Ser Phe Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu	
225 230 235 240	
aaa act tca gac aag aaa aag att gca caa ttc aga aaa gag aaa gag	768
Lys Thr Ser Asp Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu	
245 250 255	

# Sequence Listing

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<p>act ttc aag gaa aaa gat aca tat aag cta ttt aaa aat gga act ctg            Thr Phe Lys Glu Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu                      260                          265                          270</p>	816
<p>aaa att aag cat ctg aag acc gat gat cag gat atc tac aag gta tca            Lys Ile Lys His Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser                      275                          280                          285</p>	864
<p>ata tat gat aca aaa gga aaa aat gtg ttg gaa aaa ata ttt gat ttg            Ile Tyr Asp Thr Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu                      290                          295                          300</p>	912
<p>aag att caa gag agg gtc tca aaa cca aag atc tcc tgg act tgt atc            Lys Ile Gln Glu Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile            305                          310                          315                          320</p>	960
<p>aac aca acc ctg acc tgt gag gta atg aat gga act gac ccc gaa tta            Asn Thr Thr Leu Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu                                      325                          330                          335</p>	1008
<p>aac ctg tat caa gat ggg aaa cat cta aaa ctt tct cag agg gtc atc            Asn Leu Tyr Gln Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile                      340                          345                          350</p>	1056
<p>aca cac aag tgg acc acc agc ctg agt gca aaa ttc aag tgc aca gca            Thr His Lys Trp Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala                      355                          360                          365</p>	1104
<p>ggg aac aaa gtc agc aag gaa tcc agt gtc gag cct gtc agc tgt cct            Gly Asn Lys Val Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro                      370                          375                          380</p>	1152
<p>gca gag ccc aaa tct tgt gac aaa act cac aca tgc cca ccg tgc cca            Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro            385                          390                          395                          400</p>	1200
<p>gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa            Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys                      405                          410                          415</p>	1248



# Sequence Listing

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<p>ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg  Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val</p> <p style="text-align: center;">420                      425                      430</p>	1296
<p>gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac  Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr</p> <p style="text-align: center;">435                      440                      445</p>	1344
<p>gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag  Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu</p> <p style="text-align: center;">450                      455                      460</p>	1392
<p>cag tac aac agc acg tac cgg gtg gtc agc gtc ctc acc gtc tgt cac  Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Cys His</p> <p style="text-align: center;">465                      470                      475                      480</p>	1440
<p>cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa  Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys</p> <p style="text-align: center;">485                      490                      495</p>	1488
<p>gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag  Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln</p> <p style="text-align: center;">500                      505                      510</p>	1536
<p>ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg  Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu</p> <p style="text-align: center;">515                      520                      525</p>	1584
<p>acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc  Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro</p> <p style="text-align: center;">530                      535                      540</p>	1632
<p>agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac  Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn</p> <p style="text-align: center;">545                      550                      555                      560</p>	1680
<p>tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc  Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu</p> <p style="text-align: center;">565                      570                      575</p>	1728

# Sequence Listing

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tac agc aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc 1776

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val

580

585

590

ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg cag 1824

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln

595

600

605

aag agc ctc tcc ctg tct ccg ggt aaa tga 1854

Lys Ser Leu Ser Leu Ser Pro Gly Lys

610

615

<210> 18

<211> 617

<212> PRT

<213> Homo sapiens

<400> 18

Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn

1

5

10

15

Val Ser Ser Lys Gly Ala Val Ser Lys Glu Ile Thr Asn Ala Leu Glu

20

25

30

Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp Ile Pro Ser Phe

35

40

45

Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu Lys Thr Ser Asp

50

55

60

Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu Thr Phe Lys Glu

65

70

75

80

Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu Lys Ile Lys His

85

90

95

Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser Ile Tyr Asp Thr

100

105

110

# Sequence Listing

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Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu Lys Ile Gln Glu  
115 120 125

Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile Asn Thr Thr Leu  
130 135 140

Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu Asn Leu Tyr Gln  
145 150 155 160

Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile Thr His Lys Trp  
165 170 175

Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala Gly Asn Lys Val  
180 185 190

Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro Lys Glu Ile Thr  
195 200 205

Asn Ala Leu Glu Thr Trp Gly Ala Leu Gly Gln Asp Ile Asn Leu Asp  
210 215 220

Ile Pro Ser Phe Gln Met Ser Asp Asp Ile Asp Asp Ile Lys Trp Glu  
225 230 235 240

Lys Thr Ser Asp Lys Lys Lys Ile Ala Gln Phe Arg Lys Glu Lys Glu  
245 250 255

Thr Phe Lys Glu Lys Asp Thr Tyr Lys Leu Phe Lys Asn Gly Thr Leu  
260 265 270

Lys Ile Lys His Leu Lys Thr Asp Asp Gln Asp Ile Tyr Lys Val Ser  
275 280 285

Ile Tyr Asp Thr Lys Gly Lys Asn Val Leu Glu Lys Ile Phe Asp Leu  
290 295 300

Lys Ile Gln Glu Arg Val Ser Lys Pro Lys Ile Ser Trp Thr Cys Ile  
305 310 315 320

Asn Thr Thr Leu Thr Cys Glu Val Met Asn Gly Thr Asp Pro Glu Leu

# Sequence Listing

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325	330	335
Asn Leu Tyr Gln Asp Gly Lys His Leu Lys Leu Ser Gln Arg Val Ile		
340	345	350
Thr His Lys Trp Thr Thr Ser Leu Ser Ala Lys Phe Lys Cys Thr Ala		
355	360	365
Gly Asn Lys Val Ser Lys Glu Ser Ser Val Glu Pro Val Ser Cys Pro		
370	375	380
Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro		
385	390	395
Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys		
405	410	415
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val		
420	425	430
Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr		
435	440	445
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu		
450	455	460
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Cys His		
465	470	475
Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys		
485	490	495
Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln		
500	505	510
Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu		
515	520	525
Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro		
530	535	540

# Sequence Listing

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Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn  
 545                                      550                                      555                                      560

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu  
    565                                      570                                      575

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val  
    580                                      585                                      590

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln  
    595                                      600                                      605

Lys Ser Leu Ser Leu Ser Pro Gly Lys  
    610                                      615

<210>     19  
 <211>     1134  
 <212>     DNA  
 <213>     Homo sapiens

<220>  
 <221>     CDS  
 <222>     (1) .. (1131)  
 <223>     CTLA4/Fc

<400>     19  
 atg agg acc tgg ccc tgc act ctc ctg ttt ttt ctt ctc ttc atc cct                                      48  
 Met Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro  
    1                                      5                                      10                                      15

gtc ttc tgc aaa gca atg cac gtg gcc cag cct gct gtg gta ctg gcc                                      96  
 Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala  
    20                                      25                                      30

agc agc cga ggc atc gcc agc ttt gtg tgt gag tat gca tct cca ggc                                      144  
 Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly  
    35                                      40                                      45

# Sequence Listing

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aaa gcc act gag gtc cgg gtg aca gtg ctt cgg cag gct gac agc cag Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln 50                      55                      60	192
gtg act gaa gtc tgt gcg gca acc tac atg atg ggg aat gag ttg acc Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr 65                      70                      75                      80	240
ttc cta gat gat tcc atc tgc acg ggc acc tcc agt gga aat caa gtg Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val 85                      90                      95	288
aac ctc act atc caa gga ctg agg gcc atg gac acg gga ctc tac atc Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile 100                      105                      110	336
tgc aag gtg gag ctc atg tac cca ccg cca tac tac ctg ggc ata ggc Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly 115                      120                      125	384
aac gga acc cag att tat gta att gat cca gaa ccg tgc cca gat tct Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser 130                      135                      140	432
gca gag ccc aaa tct tgt gac aaa act cac aca tgc cca ccg tgc cca Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro 145                      150                      155                      160	480
gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys 165                      170                      175	528
ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val 180                      185                      190	576
gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr 195                      200                      205	624

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# Sequence Listing

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```

aag agc ctc tcc ctg tct ccg ggt aaa          tga          1134
Lys Ser Leu Ser Leu Ser Pro Gly Lys
      370              375

```

```

<210> 20
<211> 377
<212> PRT
<213> Homo sapiens

```

```

<400> 20
Met Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro
  1              5              10              15

```

```

Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala
      20              25              30

```

```

Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly
      35              40              45

```

```

Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln
      50              55              60

```

```

Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr
      65              70              75              80

```

```

Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val
      85              90              95

```

```

Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile
      100             105             110

```

```

Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly
      115             120             125

```

```

Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser
      130             135             140

```

```

Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro

```



# Sequence Listing

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145	150	155	160
Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys			
165	170	175	
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val			
180	185	190	
Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr			
195	200	205	
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu			
210	215	220	
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His			
225	230	235	240
Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys			
245	250	255	
Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln			
260	265	270	
Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu			
275	280	285	
Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro			
290	295	300	
Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn			
305	310	315	320
Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu			
325	330	335	
Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val			
340	345	350	
Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln			
355	360	365	

# Sequence Listing

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Lys Ser Leu Ser Leu Ser Pro Gly Lys

370

375

<210> 21  
 <211> 1509  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1506)  
 <223> CTLA4-CTLA4/Fc

<400> 21  
 atg agg acc tgg ccc tgc act ctc ctg ttt ttt ctt ctc ttc atc cct 48  
 Met Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro  
 1 5 10 15  
 gtc ttc tgc aaa gca atg cac gtg gcc cag cct gct gtg gta ctg gcc 96  
 Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala  
 20 25 30  
 agc agc cga ggc atc gcc agc ttt gtg tgt gag tat gca tct cca ggc 144  
 Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly  
 35 40 45  
 aaa gcc act gag gtc cgg gtg aca gtg ctt cgg cag gct gac agc cag 192  
 Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln  
 50 55 60  
 gtg act gaa gtc tgt gcg gca acc tac atg atg ggg aat gag ttg acc 240  
 Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr  
 65 70 75 80  
 ttc cta gat gat tcc atc tgc acg ggc acc tcc agt gga aat caa gtg 288  
 Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val  
 85 90 95

# Sequence Listing

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aac ctc act atc caa gga ctg agg gcc atg gac acg gga ctc tac atc	336
Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile	
100 105 110	
tgc aag gtg gag ctc atg tac cca ccg cca tac tac ctg ggc ata ggc	384
Cys Lys Val Glu Leu Met Tyr Pro Pro Tyr Tyr Leu Gly Ile Gly	
115 120 125	
aac gga acc cag att tat gta att gat cca gaa ccg tgc cca gat tcg	432
Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser	
130 135 140	
gat aac atg cac gtg gcc cag cct gct gtg gta ctg gcc agc agc cga	480
Asp Asn Met His Val Ala Gln Pro Ala Val Val Leu Ala Ser Ser Arg	
145 150 155 160	
ggc atc gcc agc ttt gtg tgt gag tat gca tct cca ggc aaa gcc act	528
Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly Lys Ala Thr	
165 170 175	
gag gtc cgg gtg aca gtg ctt cgg cag gct gac agc cag gtg act gaa	576
Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln Val Thr Glu	
180 185 190	
gtc tgt gcg gca acc tac atg atg ggg aat gag ttg acc ttc cta gat	624
Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr Phe Leu Asp	
195 200 205	
gat tcc atc tgc acg ggc acc tcc agt gga aat caa gtg aac ctc act	672
Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val Asn Leu Thr	
210 215 220	
atc caa gga ctg agg gcc atg gac acg gga ctc tac atc tgc aag gtg	720
Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile Cys Lys Val	
225 230 235 240	
gag ctc atg tac cca ccg cca tac tac ctg ggc ata ggc aac gga acc	768
Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly Asn Gly Thr	
245 250 255	

# Sequence Listing

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<p>cag att tat gta att gat cca gaa ccg tgc cca gat tct gca gag ccc  Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser Ala Glu Pro  260 265 270</p>	816
<p>aaa tct tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa  Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu  275 280 285</p>	864
<p>ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac  Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  290 295 300</p>	912
<p>acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac  Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  305 310 315 320</p>	960
<p>gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc  Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly  325 330 335</p>	1008
<p>gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac  Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn  340 345 350</p>	1056
<p>agc acg tac cgg gtg gtc agc gtc ctc acc gtc tgt cac cag gac tgg  Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Cys His Gln Asp Trp  355 360 365</p>	1104
<p>ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca  Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro  370 375 380</p>	1152
<p>gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa  Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu  385 390 395 400</p>	1200
<p>cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac  Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn  405 410 415</p>	1248

# Sequence Listing

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cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc 1296  
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
                   420                  425                  430

gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc 1344  
 Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
                   435                  440                  445

acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag 1392  
 Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys  
                   450                  455                  460

ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc 1440  
 Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys  
 465                  470                  475                  480

tcc gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc 1488  
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
                   485                  490                  495

tcc ctg tct ccg ggt aaa tga 1509  
 Ser Leu Ser Pro Gly Lys  
                   500

<210> 22

<211> 502

<212> PRT

<213> Homo sapiens

<400> 22

Met Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro  
           1                  5                  10                  15

Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala  
                   20                  25                  30

Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly  
                   35                  40                  45

# Sequence Listing

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Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln  
 50 55 60

Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr  
 65 70 75 80

Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val  
 85 90 95

Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile  
 100 105 110

Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly  
 115 120 125

Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser  
 130 135 140

Asp Asn Met His Val Ala Gln Pro Ala Val Val Leu Ala Ser Ser Arg  
 145 150 155 160

Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly Lys Ala Thr  
 165 170 175

Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln Val Thr Glu  
 180 185 190

Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr Phe Leu Asp  
 195 200 205

Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val Asn Leu Thr  
 210 215 220

Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile Cys Lys Val  
 225 230 235 240

Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly Asn Gly Thr  
 245 250 255

# Sequence Listing

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Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser Ala Glu Pro  
260 265 270

Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu  
275 280 285

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
290 295 300

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
305 310 315 320

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly  
325 330 335

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn  
340 345 350

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Cys His Gln Asp Trp  
355 360 365

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro  
370 375 380

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu  
385 390 395 400

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn  
405 410 415

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
420 425 430

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
435 440 445

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys  
450 455 460

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys







# Sequence Listing

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ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc	768
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val	
245 250 255	
aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc	816
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe	
260 265 270	
aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg	864
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro	
275 280 285	
cgg gag gag cag tac aac agc acg tac cgg gtg gtc agc gtc ctc acc	912
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr	
290 295 300	
gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc	960
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val	
305 310 315 320	
tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc	1008
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala	
325 330 335	
aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg	1056
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg	
340 345 350	
gat gag ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc	1104
Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly	
355 360 365	
ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg	1152
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro	
370 375 380	
gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc	1200
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser	
385 390 395 400	

# Sequence Listing

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tcc ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag cag	1248
Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln	
405 410 415	
ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac	1296
Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His	
420 425 430	
tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa tga	1335
Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	
435 440	
<210> 24	
<211> 444	
<212> PRT	
<213> Homo sapiens	
<400> 24	
Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu	
1 5 10 15	
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro	
20 25 30	
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys	
35 40 45	
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys	
50 55 60	
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp	
65 70 75 80	
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	

# Sequence Listing

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Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg  
115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe  
130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu  
145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu  
165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr  
180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser  
195 200 205

Gly Thr Thr Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro  
210 215 220

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe  
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val  
245 250 255

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe  
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro  
275 280 285

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr  
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val  
305 310 315 320

# Sequence Listing

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Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala  
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg  
 340 345 350

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly  
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro  
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser  
 385 390 395 400

Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln  
 405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His  
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 435 440

<210> 25  
 <211> 2028  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(2025)  
 <223> TNFR2-TNFR1/Fc

<400> 25  
 atg gcg ccc gtc gcc gtc tgg gcc gcg ctg gcc gtc gga ctg gag ctc  
 Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu  
 1 5 10 15

48

# Sequence Listing

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tgg gct gcg gcg cac gcc ttg ccc gcc cag gtg gca ttt aca ccc tac	96
Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr	
20 25 30	
gcc ccg gag ccc ggg agc aca tgc cgg ctc aga gaa tac tat gac cag	144
Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln	
35 40 45	
aca gct cag atg tgc tgc agc aaa tgc tcg ccg ggc caa cat gca aaa	192
Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys	
50 55 60	
gtc ttc tgt acc aag acc tcg gac acc gtg tgt gac tcc tgt gag gac	240
Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp	
65 70 75 80	
agc aca tac acc cag ctc tgg aac tgg gtt ccc gag tgc ttg agc tgt	288
Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys	
85 90 95	
ggc tcc cgc tgt agc tct gac cag gtg gaa act caa gcc tgc act cgg	336
Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg	
100 105 110	
gaa cag aac cgc atc tgc acc tgc agg ccc ggc tgg tac tgc gcg ctg	384
Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu	
115 120 125	
agc aag cag gag ggg tgc cgg ctg tgc gcg ccg ctg cgc aag tgc cgc	432
Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg	
130 135 140	
ccg ggc ttc ggc gtg gcc aga cca gga act gaa aca tca gac gtg gtg	480
Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val	
145 150 155 160	
tgc aag ccc tgt gcc ccg ggg acg ttc tcc aac acg act tca tcc acg	528
Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr	
165 170 175	

# Sequence Listing

gat att tgc agg ccc cac cag atc tgt aac gtg gtg gcc atc cct ggg	576
Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly	
180 185 190	
aat gca agc atg gat gca gtc tgc acg tcc acg tcc ccc acc cgg agt	624
Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser	
195 200 205	
atg gcc cca ggg gca gta cac tta ccc cag cca gtg tcc aca cga tcc	672
Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser	
210 215 220	
caa cac acg cag cca act cca gaa ccc agc act gct cca agc acc tcc	720
Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser	
225 230 235 240	
ttc ctg ctc cca atg ggc ccc agc ccc cca gct gaa ggg agc gga tcc	768
Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Gly Ser	
245 250 255	
ggg aac att tca ctg gtc cct cac cta ggg gac agg gag aag aga gat	816
Gly Asn Ile Ser Leu Val Pro His Leu Gly Asp Arg Glu Lys Arg Asp	
260 265 270	
agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg att	864
Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile	
275 280 285	
tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca	912
Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro	
290 295 300	
ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc	960
Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe	
305 310 315 320	
acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc	1008
Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys	
325 330 335	

# Sequence Listing

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cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg	1056
Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg	
340 345 350	
 gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt	1104
Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser	
355 360 365	
 gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc	1152
Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr	
370 375 380	
 gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat	1200
Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His	
385 390 395 400	
 gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt	1248
Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys	
405 410 415	
 aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat	1296
Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn	
420 425 430	
 gtt aag ggc act gag gac tca ggc acc aca gca gag ccc aaa tct tgt	1344
Val Lys Gly Thr Glu Asp Ser Gly Thr Thr Ala Glu Pro Lys Ser Cys	
435 440 445	
 gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa ctc ctg ggg	1392
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly	
450 455 460	
 gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg	1440
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met	
465 470 475 480	
 atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc cac	1488
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His	
485 490 495	



# Sequence Listing

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gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg	1536
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val	
500 505 510	
cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc acg tac	1584
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr	
515 520 525	
cgg gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc	1632
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly	
530 535 540	
aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc	1680
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile	
545 550 555 560	
gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg	1728
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val	
565 570 575	
tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc	1776
Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser	
580 585 590	
ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag	1824
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu	
595 600 605	
tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg cct ccc	1872
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro	
610 615 620	
gtg ctg gac tcc gac ggc tcc tcc ttc ctc tac agc aag ctc acc gtg	1920
Val Leu Asp Ser Asp Gly Ser Ser Phe Leu Tyr Ser Lys Leu Thr Val	
625 630 635 640	
gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg	1968
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met	
645 650 655	

# Sequence Listing

cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct 2016  
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser  
660 665 670

ccg ggt aaa tga 2028  
Pro Gly Lys  
675

<210> 26  
<211> 675  
<212> PRT  
<213> Homo sapiens

<400> 26  
Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu  
1 5 10 15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr  
20 25 30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln  
35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys  
50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp  
65 70 75 80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys  
85 90 95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg  
100 105 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu  
115 120 125

# Sequence Listing

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Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg  
 130 135 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val  
 145 150 155 160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr  
 165 170 175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly  
 180 185 190

Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser  
 195 200 205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser  
 210 215 220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser  
 225 230 235 240

Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Gly Ser  
 245 250 255

Gly Asn Ile Ser Leu Val Pro His Leu Gly Asp Arg Glu Lys Arg Asp  
 260 265 270

Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile  
 275 280 285

Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro  
 290 295 300

Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe  
 305 310 315 320

Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys  
 325 330 335

Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg

# Sequence Listing

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340	345	350
Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser		
355	360	365
Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr		
370	375	380
Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His		
385	390	395 400
Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys		
405	410	415
Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn		
420	425	430
Val Lys Gly Thr Glu Asp Ser Gly Thr Thr Ala Glu Pro Lys Ser Cys		
435	440	445
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly		
450	455	460
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met		
465	470	475 480
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His		
485	490	495
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val		
500	505	510
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr		
515	520	525
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly		
530	535	540
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile		
545	550	555 560

# Sequence Listing

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Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val  
565 570 575

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser  
580 585 590

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu  
595 600 605

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro  
610 615 620

Val Leu Asp Ser Asp Gly Ser Ser Phe Leu Tyr Ser Lys Leu Thr Val  
625 630 635 640

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met  
645 650 655

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser  
660 665 670

Pro Gly Lys  
675